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RESEARCH AND DEVELOPMENT

Monthly Progress Reports

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SEPTEMBER 1980

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PME RESEARCH LABORATORY, SEPTEMBER 1980

PROJECT TITLE : PRODUCT RESEARCH

PERIOD COVERED : SEPTEMBER 1980

WRITTEN BY : J. BOURQUIN

INSTRUMENT DEVELOPMENT

CO/NO Analysis at the QC Smoking Laboratory

A new circuit has been designed for the interconnection and mutual control of the CO and NO analyzers, the RM 20/CS smoking machine and the HP 9825 calculator. Another circuit has been realized for the purpose of testing the system's hard-and software which simulates the action of the RM 20/CS smoking machine.

J. Bourquin

PME RESEARCH LABORATORY, SEPTEMBER 1980

PROJECT TITLE : PRODUCT RESEARCH

PERIOD COVERED : SEPTEMBER 1980

WRITTEN BY : Y. GENOUD

ANALYSIS OF TOTAL CONDENSATE IN FILTER EXTRACTS

Product Development requested the determination of total condensate filter retention (filter efficiency/dilution study) (1). A method adapted from ISO/TC 126 and allowing the UV-spectroscopic and quantitative determination of condensate has been set up and is now ready to be applied (2).

TRIACETIN ANALYSIS BY GC^2

With the objective to find out about competitors using Eastman's Estrobond B as filter additive, triacetin concentrations and triacetin "additives" are presently monitored in filters of numerous European competitive brands. Results will be given after the study has been completed (3).

ADSORBENTS

Evaluation and characterization of new commercial fileter adsorbents was taken over from P. Ghiste who has been transferred to the Biotechnology Group. Familiarization with instruments and techniques is in progress.

REFERENCES

(1) Memo of L. Joseph to W. Fink, August 26, 1980.

(2) Memo of Y. Genoud to W. Fink, September 30, 1980.

(3) Memo of M. Häusermann to W. Fink, July 17, 1980.

Y. Genoud

PME RESEARCH LABORATORY, SEPTEMBER 1980

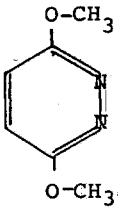
PROJECT TITLE : ANALYTICAL INVESTIGATIONS

PERIOD COVERED : AUGUST 30 - SEPTEMBER 25, 1980

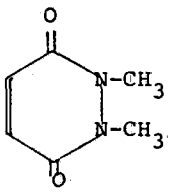
WRITTEN BY : E. LECOULTRE

COMPOUND IDENTIFIACTION

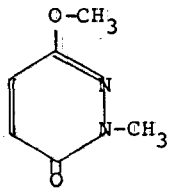
The pesticide laboratory requested the identification of a compound obtained by the reaction of maleic hydrazide with dimethyl sulfate and which was supposed to have structure I or II (1).



I



II



III

The compound of mp. 49-51° (from cyclohexane) and composition $C_6H_8O_2N_2$, gives in GC^2 a single peak at RT 4.5 min (column 12 m x 0.2 mm, fused silica with SP 2100, temp. programme 80° to 150°, 15°/min). GC^2/MS shows M^+ at 140 m/e (100 %) and main fragments at 112 (34), 82 (21), 80 (33), 69 (74) and 54 (20) m/e.

The final assignment of structure is based on ^1H and ^{13}C-NMR. The ^1H-NMR spectrum (60 MHz, DMSO) shows the signals of two different CH_3 protons at 3.5 and 3.7 ppm (1:1) and of the HC= protons at 6.9-7.2 ppm. In the ^{13}C-NMR spectrum ($CDCl_3$) signals are found for $\underline{C}H_3O$ and $\underline{C}H_3N$ at 54.2 and 39 ppm and for two not identical olefinic carbons at 126.3 and 132.3 ppm.

From these data, structure III has been assigned.

ORGANIC ACIDS

For Candida utilis 707/3 metabolism control Biotechnology requested quantitation of acetic, citric, lactic, malic, succinic, fumaric, tartaric and pyruvic acid (2). The possibilities of a group analysis as p-bromophenacyl derivatives by GC or LC are presently being investigated.

CF-ANALYSIS

- The compound simulating the presence of coumarin in some filler extracts analyzed for CF (3) was identified by GC^2/MS as antioxydants BHT (2,6 di-tert-butyl-4-methylphenol). The compound, as well as diethylphtalate, derived from the GC sample microvial caps used (supplier: Infochroma).

- The GC method has been extended to the analysis of dihydrocoumarin and of 6-methylcoumarin in filler by using n-hexadecane (C_{16}) as internal standard. The chromatogram of a synthetic mixture of coumarin, dihydrocoumarin and of 6-methylcoumarin is given in figure 1.

ROUTINE ANALYSES

Phosphate (165 samples), sulfate (105), amino acids (59) and alcohols (40) were determined for Biotechnology, Process Dev. and Product Research.

Coumarin was analyzed in 30 brands.

REFERENCES

(1) M. Speck, PME Research Lab. Monthly Progress Report, September 1980.

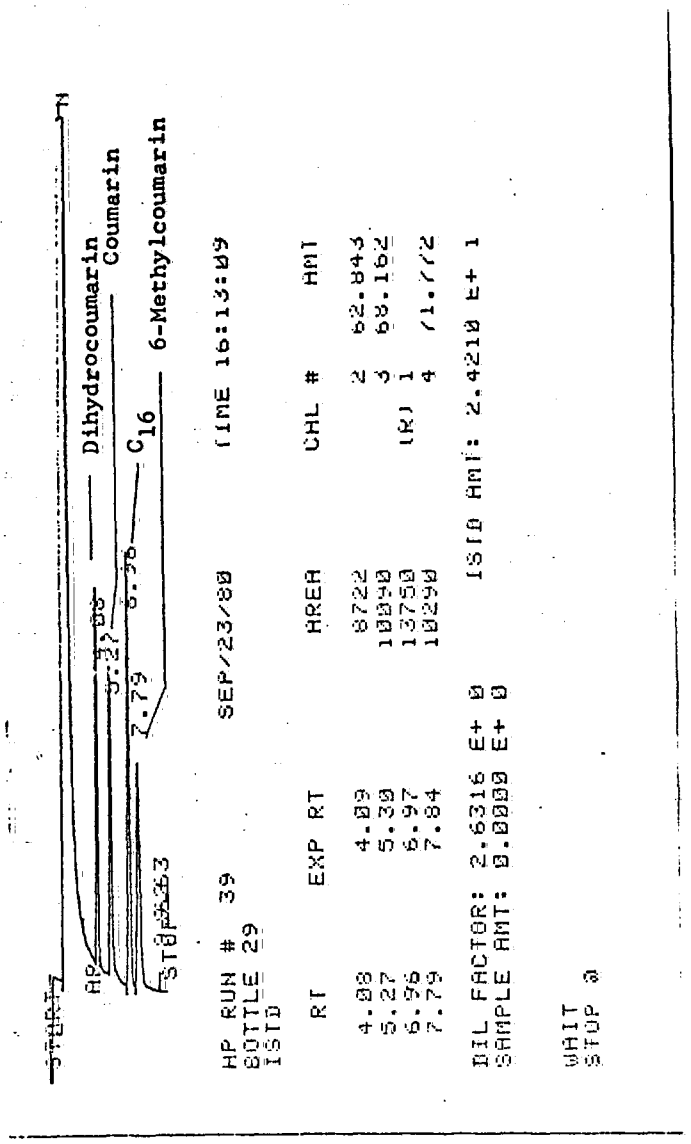
(2) Memo of H. Gaisch to W. Fink, September 1980.

(3) E. Lecoultre, PME Research Lab., Monthly Progress Report, August 1980.

E. Lecoultre

Figure 1 : Gas Chromatogram of a Synthetic Mixture of Dihydrocoumarin, Coumarin and 6-Methylcoumarin.

Internal Standard: n-Hexadecane (C_{16}).



PME RESEARCH LABORATORY, SEPTEMBER 1980

PROJECT TITLE : AGRICULTURAL CHEMICALS

PERIOD COVERED : SEPTEMBER 1980

WRITTEN BY : M. SPECK

ROUTINE ANALYSES

Number of samples analyzed for pesticide residues in September:

Organocholorine	104
Organophosphorus	66
Organophosphorus + Methamidophos	24
Dithiocarbamate	91
Maleic Hydrazide	98
Ridomil	8

NEW ANALYTICAL METHODS

Maleic Hydrazide (1):

The reaction of maleic hydrazide with methyl iodide in methanol in the presence of K_2CO_3 or with dimethyl sulfate in 10 % KOH-solution in both cases gives low melting crystalline products. The products which are formed in high yields can be re-crystallized from cyclohexane. Both compounds when dissolved in dichloromethane show in the gas chromatogram a single, sharp peak with identical retention times. We assume the compound to be dimethoxy pyridazine. The compounds have been sent to the Analytical Service Group for identification.

REFERENCE

(1) M. Speck, PME Research Lab, Monthly Progress Report, July 1980.

M. Speck

PME RESEARCH LABORATORY, SEPTEMBER 1980

PROJECT TITLE : BIOTECHNOLOGY

PERIOD COVERED : SEPTEMBER 1 - 30, 1980

WRITTEN BY : J. BERNEY

ACETIC ACID (1)

An enzymatic method (2) was tested out and used to determine acetic acid in denitrated stem extracts.

If acetic acid is used to maintain the pH in NINO trials, 1.5 g can be found in 1 litre of denitrated extract. Thus, 94 % of the added acetic acid are metabolized (3), regardless of the pH used.

NITRATE VARIATIONS (4)

A series of trials were started to check the flexibility of the NINO system towards nitrate fluctuations.

Working at standard conditions (pH 5.5, 30° C, lactic acid) and a dilution rate of 0.13 hr^{-1}, nitrate concentrations in the extract were deliberately increased from 3 to 6 g/l, and again decreased to 3 g/l after a stabilization period of 24 hours. The glucose: nitrate ratio was maintained at 8.33. As expected, no nitrate could be detected at any time in the effluent of the fermenter. These trials will continue all by using higher dilution rates and more drastical changes in nitrate concentrations.

MISCELLANEOUS

- Assitance was given for current pilot plant trials.
- Part of the equipment for the nitrate monitoring system was received and is currently under test.
- Routine analysis: 4 samples (citrate).

REFERENCES

(1) J. Berney, Notebook 800802, 1-6.

(2) Boehringer Mannheim, Biochemica, Acetic Acid Analysis.

(3) J. Berney, Monthly Report, August 1980

(4) M.F. Mangilli, Notebook 800801, 1-4.

J. Berney

PME RESEARCH LABORATORY, SPETEMBER 1980

PROJECT TITLE : SALAMANDER-II

PERIOD COVERED : SEPTEMBER 1980

WRITTEN BY : Y. GENOUD

The objective of project Salamander-II is to develop zero-ISH cigarettes of commercial quality.

1. RESULTS OF PREVIOUS WORK

Table 1 shows a summary of results of previous experiments using the cigarette SPOTLESS ØS-B-TOT. The smoke had been passed through different filtering systems in order to eliminate or remove certain groups of constituents: "no trap" signifies whole smoke, i.e. the control, "Cambridge filter" means particle phase removed, i.e. gas vapour phase, "charcoal" indicates the remainder of smoke from which virtually the whole organic gas phase (vapour phase) and some NO had been removed, "water" represents a wash bottle switched into the smoke stream, and "water + phenylhydrazine" the equivalent trap for carbonyls.

Tha values in Table 1 would indicate therefore

- a major contribution of the gas phase to the ISH of this cigarette smoke
- no major effect of carbonyl removal on the ISH of the smoke of this cigarette
- some association between NO removal and ISH decrease.

It should be remembered that a survey of some commercial cigarette brands and some experimental cigarettes had shown an association between volatile aldehyde and ISH (Monthly Report, October, 1979). These seemingly paradoxical findings are probably explained by the fact that different families or types of cigarettes differ in the smoke constituent(s) that interact most intensely with cysteine.

2. RESULTS OBTAINED WITH CIGARETTES PREPARED FOR PROJECT SPOTLESS

The 16 cigarettes are listed in Table 2, completed with code information.

The results obtained with these cigarettes are given in Table 3 and figures 1 to 4 show the relation between the main components of the smoke and the ISH values.

With these results the non visible influence of aldehydes is confirmed but there is also no correlation between NO and ISH. The introduction of CO data lets appear a possible correlation between CO and ISH.

The correlation appears better on Figure 5 where the values are given per puff (the R square of the straight line is 0.8).

3. FUTURE PLANS

- Confirmation/invalidation of the correlation between CO and ISH.
- Continuation of the work on derivatives of cysteine, cystine and thiazolidine.

Y. Genoud

Table 1 : Trapping of Gas Phase

Trapping system	No trap	Cambridge filter %	Charcoal %	Water %	Water + Phenylhydrazine %
Organic gas phase variation	0	0	-100	-3	100 of aldehydes and ketones
NO variation	0	-5	-48	-20	-32
ISH variation	0	-5	-43	-21	-20

Table 2 : Prototype Cigarettes of Project Spotless

B Blend (Type MLF)

ØS-B-TOT	100 kg of blend (B-FC, B-BU, B-OR), untreated manufacture of cigarettes
ØS-B-TOT/SPO	30 kg of blend (B-FC, B-BU, B-OR), denitrated manufacture of cigarettes
ØS-B-FC	20 kg of B-FC, untreated manufacture of cigarettes
ØS-B-BU	20 kg of B-BU, untreated manufacture of cigarettes
ØS-B-OR	20 kg of B-OR, untreated manufacture of cigarettes
ØS-B-FC/SPO	30 kg of B-FC, denitrated manufacture of cigarettes
ØS-B-BU/SPO	30 kg of B-BU, denitrated manufacture of cigarettes
ØS-B-OR/SPO	30 kg of B-OR, denitrated manufacture of cigarettes
ØS-B/SPO/SPO/SPO	blend of ØS-B-FC/SPO denitrated ØS-B-BU/SPO denitrated ØS-B-OR/SPO denitrated

A Aircured (Type BRD)

ØS-A-TOT	100 kg of blend (A-MD, A-CH), untreated manufacture of cigarettes
ØS-A-TOT/SPO	30 kg of blend (A-MD, A-CH), denitrated manufacture of cigarettes
ØS-A-MD	20 kg of A-MD, untreated manufacture of cigarettes
ØS-A-CH	20 kg of A-CH, untreated manufacture of cigarettes
ØS-A-MD/SPO	30 kg of A-MD, denitrated manufacture of cigarettes
ØS-A-CH/SPO	30 kg of A-CH, denitrated manufacture of cigarettes
ØS-A/SPO/SPO	blend of ØS-A-MD/SPO denitrated ØS-A-CH/SPO denitrated

Table 2 (cont'd) : Code System

First Sign : Ø (zero) for the year 1980
B : for Blend
A : for Aircured
SPO : for denitrated

We decided to use two types of blend for the SPOTLESS project:

B Blend (Type MLF)

This blend has the following composition:

B-FC/Partie No. 834	Fluecured (US + ET No. 2)	31.0 %
B-BU/Partie No. 835	Burley (US + Subst.) + RL	53.7 %
B-OR/Partie No. 836	Oriental	15.3 %
		100.0 %

This blend is made according to the MLF Version Atlantic 8222 (1).

A Aircured (Type BRD)

This blend has the following composition:

A-MD/Partie No. 832	Maryland (US + IT) + Oriental + RL	88.0 %
A-CH/Partie No. 833	Swiss (strips)	12.0 %
		100.0 %

This blend is made according to the BRD Version Atlantic 8331 (2).

Table 3 : Spotless Cigarettes

CIGARETTES	PUFFS	CO mg/cig	NO mg/cig	HCN mg/cig	Ald. Tot. mg/cig	ISH	ISH/PUFF
1 OS-A-TOT	6.6	17.6	0.27	193	1.31	45	6.8
2 OS-A-TOT/SPO	6.8	18.5	0.04	116	1.69	39	5.7
3 OS-A-MD	8.3	21.8	0.39	231	1.78	45	5.4
5 OS-A-MD/SPO	7.0	17.3	0.03	98	1.68	42	6.0
4 OS-A-CH	7.2	21.5	0.36	146	1.25	48	6.7
6 OS-A-CH/SPO	7.4	17.7	0.04	124	1.67	27	3.65
1 OS-B-TOT	8.0	16.1	0.31	243	1.41	38	4.75
2 OS-B-TOT/SPO	6.4	15.3	0.03	91	1.40	34	5.3
3 OS-B-FC	8.3	16.5	0.10	244	1.56	34	4.1
6 OS-B-FC/SPO	7.1	15.9	0.03	149	1.76	33	4.65
4 OS-B-BU	7.7	18.7	0.47	199	1.27	40	5.2
7 OS-B-BU/SPO	6.3	13.4	0.02	64	1.37	28	4.45
5 OS-B-OR	15.7	17.2	0.12	202	1.54	33	2.1
8 OS-B-OR/SPO	7.1	14.7	0.04	160	1.62	32	4.5
7 OS-A/SPO/SPO	7.1	17.2	0.03	96	1.60	33	4.65
9 OS-B/SPO/SPO/SPO	6.9	15.7	0.03	91	1.55	36	5.2

Figure 1

Figure 2

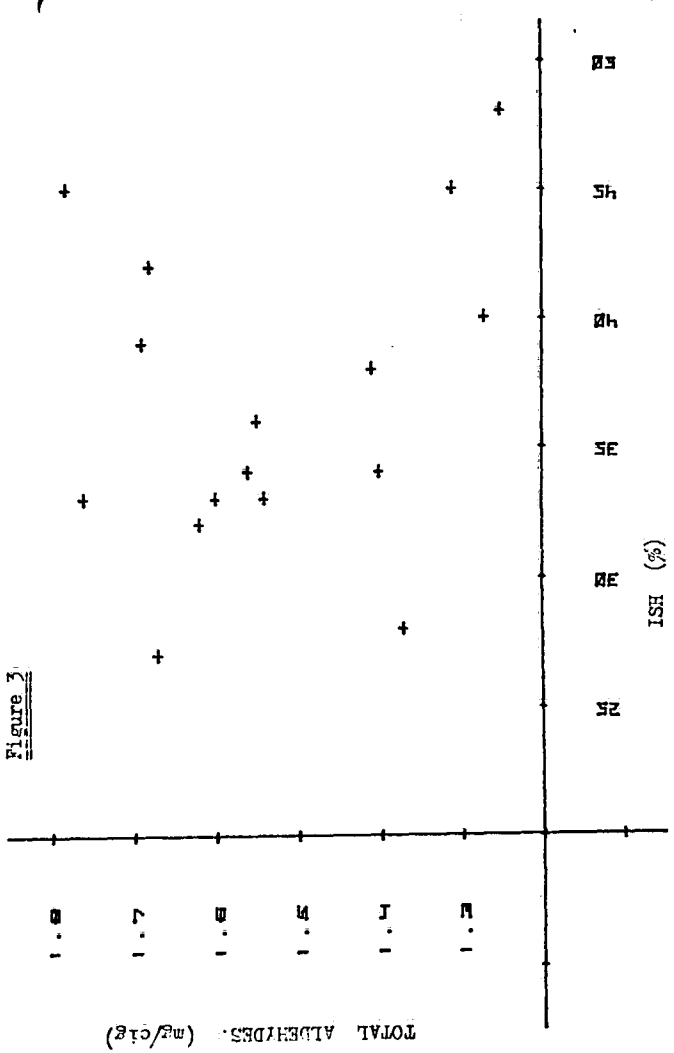


Figure 3

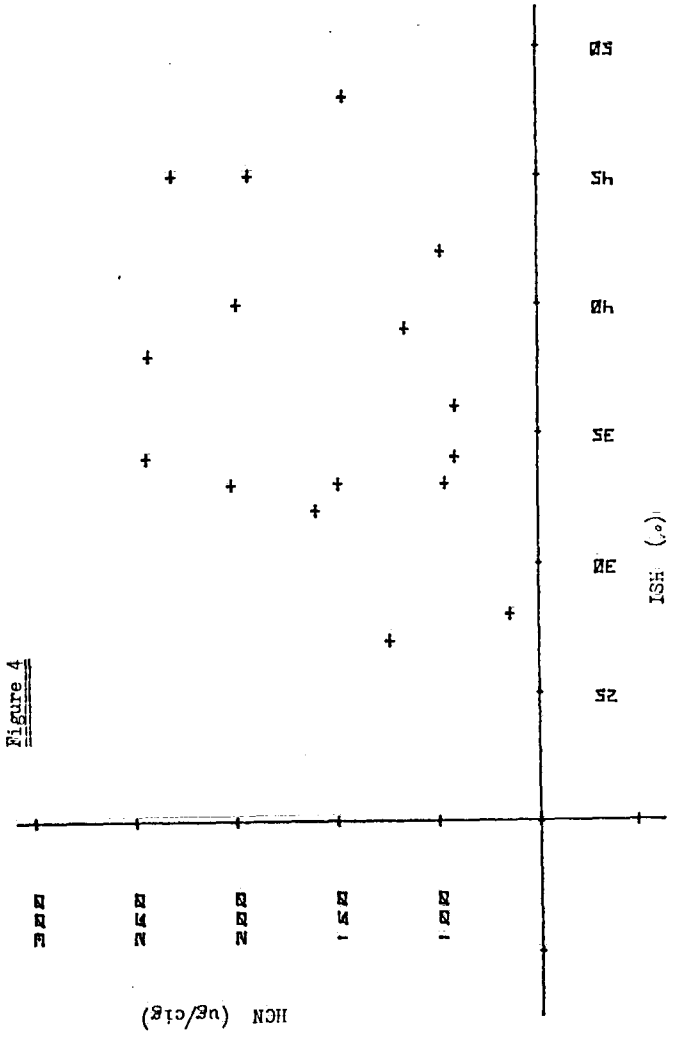
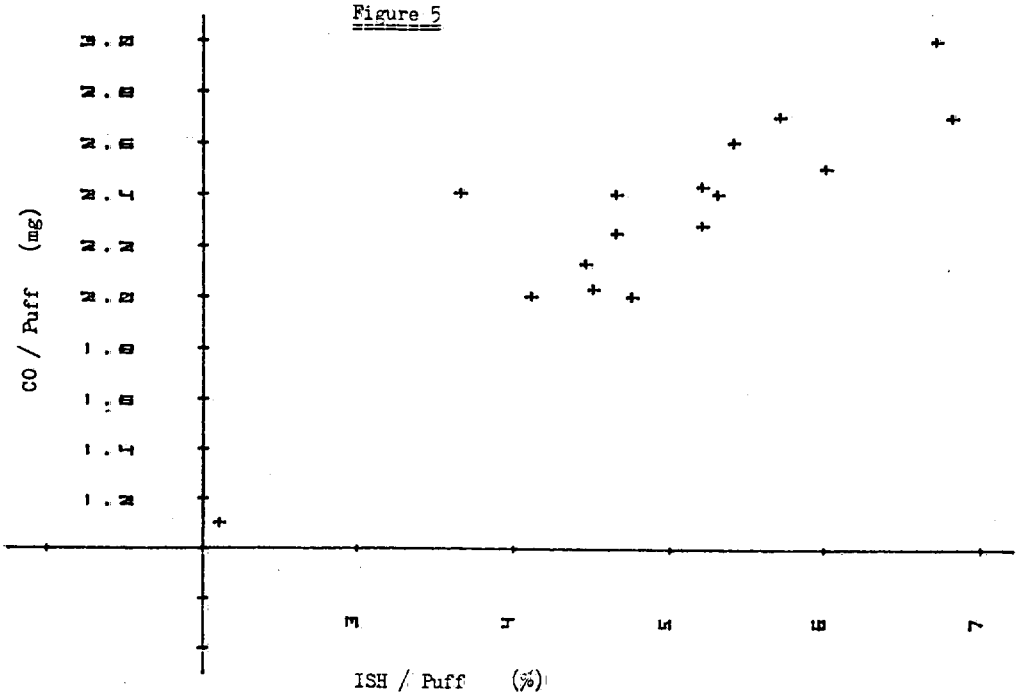


Figure 4

Figure 5



PME RESEARCH LABORATORY, SEPTEMBER 1980

PROJECT TITLE : PROTAGORAS

PERIOD COVERED : SEPTEMBER 1 - 30, 1980

WRITTEN BY : A. HAENGGI

The objective of the project PROTAGORAS is to produce cigarettes of tobacco from which protein has been removed. This is in order to eliminate some of the precursors of nitrogen-containing smoke constituents. At a later stage of the project, specific protein fractions will be re-added to the deproteinated filler for taste improvement.

1. ACTIVITY OF PROTEOLYTIC ENZYMES (1)

The Azocoll test (2) was used to determine the activity of proteolytic enzymes currently applied in our trials. One unit represents the activity that releases enough Azo dye to give an absorption of 0.001 per min. under test conditions.

Enzyme	Manufacturer	Units/mg
Protease VII	Sigma	9966
Protease VIII	"	12322
Protease X	"	10416
Pronase	Boehringer	2216
Protease	Calbiochem	10077

2. EXTRACTION OF PROTEIN FROM THE B BLEND USING DIFFERENT PROTEASES (3)

Conditions: Tobacco : water = 1 : 10
pH = 7.5
Agitation = 140 r.p.m.
Incubation time = 6 hrs.
Enzymes = 375 mg/100 g tobacco.

Enzyme	% Protein extracted at	
	37° C	50° C
Control	34	35
Protease VII	58	53
Protease VIII	61	55
Protease X	51	53
Pronase	57	50

Extractions worked better at 37° C than at 50° C. No obvious correlation exists between the activity of the enzymes and the amount of protein extracted.

3. ELIMINTATION OF PROTEIN FROM TOBACCO EXTRACT (4)

Tobacco extracts from the above described extraction trials were passed through an Amicon ultrafiltration unit. Following protein eliminations could be obtained:

Minimal Molecular Weight of Retained Protein	Elimination of Protein %
5000	21
10000	14-16
50000	6

The results show that proteins extracted from tobacco with proteolytic enzymes are rather small. Ultrafiltration cannot be the only step for their elimination.

REFERENCES

(1) A. Haenggi, Notebook 791201, p. 1-7.

(2) Calbiochem-Behring Corp., Internal Publication on Azocoll, 1979.

(3) A. Haenggi, Notebook 791201, p. 8-12, p. 14-15.

(4) A. Haenggi, Notebook 791201, p. 13.

A. Haenggi

PROJECT TITLE : Nitrate Reduction by Controlled Fermentation

PERIOD COVERED : September 1st - 25th, 1980

WRITTEN BY : C. Ruf

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1. TRIALS

Trial NINO 63

This trial has been running since September 1st and is the first part of the second extended period.
Its objective is to run the fermentation at a temperature higher than 30°C for several weeks.
Despite a laborious start-up due to problems with the dryer, the pO_2 probe and some electrical motors (Ref. 1) the fermenter has now been working for two weeks at 35°C and at a dilution rate of 0.2. Even though the extract is totally denitrated most of the time, it is obvious that at this temperature the process is much less flexible. An accidental variation of any working parameter leads to partial perturbation of the process and to a residual amount of NO_3-N in the fermented extract for several hours.
The next temperature to be tested will be 33°C.

2. NINO SCALE-UP

The NINO-RL pre-engineering study was discussed on September 8th with representatives from PEC. New figures derived from a SEL flow rate of 100 Gal/min were calculated. They were confirmed by telex to PEC (Ref. 2) who has to modify the study accordingly.
One of the main modifications is the addition of a second washing step for the NINOMASS. The mass balance around the centrifugation with two washing steps was calculated (Ref. 3).

3. PILOT PLANT

See monthly report of September 1980 : "Pilot Plant Operations" by N. Lüthi.

4. MISCELLANEOUS

The Swiss federal customs office agreed with a proposition made by our Leaf Department on the accounting procedure of the NINO feedstock (Ref. 4). A detailed proposal will be soon available.

5. REFERENCES

Ref. 1 : "Pilot Plant Operations" Monthly Report, September 1980, N. Lüthi.

Ref. 2 : Telex from H. Friedrich to Mr. W. Frei, PEC, September 11th, 1980

Ref. 3 : "NINO Park 500" C. Ruf, September 25th, 1980

Ref. 4 : "Procès-verbal de la séance du 12.9.1980" C. Allemand, September 25th, 1980.

PROCESS DEVELOPMENT

C. Ruf

CLR/sde
September 29th, 1980

PROJECT TITLE : Pilot Plant Operations

PERIOD COVERED : September 1st - 26th, 1980

WRITTEN BY : N. Lüthi

The second extended period of NINO trials started on September 1st. Since then the NINO process has been running continuously, 24 hours per day, weekend included.

1. EQUIPMENT

1.1. Liquor clean-up

During the start-up phase of the rented disk centrifuge quite a few problems had to be solved. Finally the centrifuge has been working to our satisfaction but it has to be cleaned completely once per shift.
First analyses showed much better fiber separation as compared with the old basket filter.

1.2. Dryer

The power transmission of the drive of the gas dryer had to be modified. Instead of belts we are now using a chaine. In order to get a better efficiency of the gas burners some of them had to be modified.

1.3. Sterilization and pasteurization line of the extract

At the beginning of the new period of NINO trials some clogging problems were observed in the sterilization as well as in the pasteurization linesof the extract.
Since the centrifuge for the liquor clean-up is working well no other cloggings were observed.

1.4. Fermenter

Some electronic problems were observed with the pO_2 measuring. The problems could be solved by the FTR electronicsdepartment.

1.5. Centrifuge for NINOMASS separation

Since September 1st two failures of the centrifuge motor were observed.
Contact was taken with the FTR electrical department. It was decided to send the motor to an external electrical specialist for control and repairing. Until the return of the motor we are using the rented centrifuge for the NINOMASS separation.

1.6. Evaporation

The motor of the distillate pump broke down. A new motor has been installed.

2. MATERIALS

2.1. Extract of NINO trial 57

All the drums in Onnens were again checked in order to control the plugs (Ref. 1).
By opening the drums a high pressure was found and most of the plugs were again strongly corroded. Therefore it was decided to take all the drums back and to destroy the extract.
Since the new period of NINO trials we are using plastic plugs instead of aluminium.

3. LABORATORY

3.1. The Auto Analyzer Technicon arrived at the end of August and was installed.

3.2. Our laboratory technician has followed a training course for the Auto Analyzer organized by Technicon France (Ref. 2).
He will now be able to operate the Auto Analyzer.

4. REFERENCES

Ref. 1 : Monthly report, June 1980, Pilot Plant Operations by N. Lüthi

Ref. 2 : Memo to C. Ruf from J.-M. Chassot, Cours Technicon AA II, September 25th, 1980.

PROCESS DEVELOPMENT

N. Lüthi

NIL/sde
September 30th, 1980

PROJECT TITLE : UNIT OPERATIONS I

PERIOD COVERED : July 29th - September 26th, 1980

WRITTEN BY : P.Karbacher

NINOMASS

The final test plan was established to use NINOMASS in chicken fodder by V L G Z. The test will start on October 3rd 1980. During six weeks a fodder containing 6% of dried NINOMASS will be given to chickens. This fodder includes 21 - 22% crude protein and 1.2% lysine. To exclude sex specific differences, the test group is composed of 50% female and 50% male animals. A lot of different parameters will be tested and analyzed, mainly the weight increase over time and the residuals in the meat.

RL - HANDSHEET MAKING UNIT

A 12" x 12" sheet mould was ordered in the USA.
The delivery is scheduled for January 1981.
The freeness tester should arrive around mid October 1980 and the valley beater in December 1980.
RL handsheet samples can therefore not be produced before February 1981.

PROCESS DEVELOPMENT

P. Karbacher

KPA/sde
September 29th, 1980

PROJECT TITLE : Reconstituted Tobacco

PERIOD COVERED : July 25th - September 26th, 1980

WRITTEN BY : P. Karbacher

MONIQUE/RCB

Equipment modification (Ref. 1)

All equipment modifications planned for the summer shut down were finished on schedule and the production resumed on August 4th, 1980.
The new Moyno pumps work well and the separate head tank for ammonia provides an exact volume per batch and its level is easily adjustable.

Refiner gaskets

A study is under way to find a solution to extend the life of the refiner gaskets.

Doctor knife

One doctor knife support bracket made from aluminium to reduce weight for easier handling was installed. As it performed successfully a second one was ordered.

Building

The painting of the walls was finished and parts of the ceiling were insulated.
During the summer months some excessive ambient air temperatures in the working area were experienced.
A study was initiated to equip the Luwa installation with an air cooler.

Feedstock

A new lot of stems, number 7970 was used for production. Some Indian OTMs were introduced in addition to the FTR materials.

Feeding system, stems silo-slurry mixer.

Two breakdowns occured with the screw conveyor for stems to the slurry mixer. A total of 3 days of production were lost for repair.

Roll coater, rubber roll

We observed random blockings of the main drive system for the

roll coater. As the rubber roll is pressed on the moving steel-belt, stopping the latter leads to a deformation of the rubber roll if this not immediately lifted off by the operator.
The flattening of the roll then causes the stripes in the sheet.
The reasons for these blockings are not known yet but we suppose that failures in the electronic motor control system may be caused by excessive ambient temperatures or insufficient cooling of the control box.
A safety system was developed and installed which automatically lifts the roll off the steelbelt in case of stops.

The peripheral speed of the rubber roll was increased from 76 to 120 m/min. Our target is to achieve 200 m/min. Therefore some modifications of the drive system have to be carried out, in particular the belt pulleys of the gearboxes and the motor drive.

Dust sieving trial with OTMs from India (Ref. 2)

With regard to the future use of one lot of Indian OTMs in the Monique/RCB feedstock in addition to the FTR material an industrial sieving trial was conducted on September 8th, 1980. About 1'000 kg of this material were sieved on the Monique installation and the following distribution was found :

> 80 mesh	: 62%
< 80 mesh, > 100 mesh	: 20%
< 100 mesh	: 18%

Product utilization

A Marlboro trial blend was prepared containing 5.1% of current production Monique/RCB instead of 3.4% as used at present.
The cigarettes were evaluated by panel A and found to be different in taste from the control. The first five puffs of the trial cigarettes showed a more aggressive taste.
On this base the incorporation of 5.1% of Monique/RCB was not accepted (Ref. 3).
The smoke analysis of the two samples did not show significant differences.

In order to decrease the stock level about 70 tons of Monique/RCB product were transferred to PMH.

Monique/RCB trials (Ref. 4)

Two trials were carried out using a totally different feedstock composition established together with the leaf department.

100% sheet cigarettes were hand-made and will be evaluated by Panel A as soon as possible.

REFERENCES

Ref. 1 : Rapport mensuel, août 1980, F. Boichat

Ref. 2 : Essais de tamisage poussière d'Inde, P. Karbacher, 9 septembre 1980

Ref. 3 : Test de dégustation No. 283 du 19 septembre 1980

Ref. 4 : Letter from P. Karbacher to J.-P. Caccivio, September 10th, 1980.

PROCESS DEVELOPMENT

P. Karbacher

KPA/sde
September 30th, 1980

PROJECT TITLE : CIGARETTE DEVELOPMENT
TECHNICAL REPORT

WRITTEN BY : R. TOIMIL

PERIOD COVERED : August 21st - September 30th 1980

A R E A I I I

I T A L Y

307 QUEEN

Format : 7.35 / 25 / 97.5 mm
TAR : 12.0 mg
SN : 0.6 mg

The production trials of filters carried out in Intertaba showed that the specified RTD (520 mm WG) cannot be achieved. In order to maintain the smoke yield of the final product more porous plug wrap (FU-POV 60 L) was sent to Intertaba. Several boxes containing filters made with the FU-POV 60 L plug wrap have been sent to Bergen Op Zoom (Holland), as well as cigarette paper and tipping paper to make trials on machines.
The prototypes with the FU-POV 60 L plug wrap having an RTD of 500 mm WG will be sent from Bergen Op Zoom to FTR for analyses, as well as the cigarettes of the first production carried out according to the provisional specifications of the 22nd of August 1980 (based on the prototype W6, with the FU-POV 24 K plug wrap.

376 FANGIO

Format : 7.35 / 25 / 97.5 mm
TAR : 10 mm
SN : 0.75 mm

Following the "Project Situation" meeting, held on August 22nd 1980, it was decided (in agreement with the Marketing Area III) to produce the prototypes FANGIO with the same format as the prototypes QUEEN.

- Filter length on cigarette : 25 mm (US : 31.5 mm)
- Total length : 97.5 mm (US : 98.5 mm)
- Diameter : 7.35 mm (US : 7.32 mm)

Trials will be carried out as soon as project QUEEN is launched.

301 HILTON 100'S — Format change of the HILTON cigarettes from 7.95 / 25 / 84.4 to 7.95 / 25 / 99 mm

We are awaiting the prototypes from Munich for analyses and taste evaluation.

380 GAMMA 100'S — Format change of the GAMMA cigarettes from 7.95 / 25 / 84.4 to 7.95 / 25 / 99 mm

We are awaiting the PMS tobacco to start the production of several prototypes.

257 LOS ANGELES

Different bobbins of cigarette papers (Pela 150 and 170) have been sent to Intertaba in order to carry out trials on machines.
The physical analytical results of these papers correspond to the specifications.

F R A N C E

257 LOS ANGELES

Provisional specifications have been established for the production of the diluted MAA with the new rehanced blend from Holand (sale in France).

B E L G I U M + H O L L A N D

340 GAMMA BENELUX — Product test

The different test cigarettes have been analysed and submitted to the Panel A. The cigarettes are within the objectives and the product test is now in the field.
A product test report is being established.

A R E A I V

E A S T G E R M A N Y

322 KORN I

Provisional specifications for the production in Dresden of the cigarettes MPH have been established.

P A N E U R O P E

350 PETER PAN

Different prototypes L & M were produced with micro-laser tipping papers from Malaucène and the new flavour system from Richmond. Analytical results will be available shortly.

381 ETON

We are awaiting the expanded tobaccos made in Onnens to evaluate these products.

R. Toïmil

PROJECT TITLE	:	CIGARATTE DEVELOPMENT TECHNICAL REPORT
WRITTEN BY	:	J.-H. DU BOIS
PERIOD COVERED	:	August 21st - September 26th 1980

S W E D E N

355 GOSTA I

A product delivering 1 mg tar or less. SN and CO values are not specified and should be commensurately low. American blend type of taste. Moderate size format with cork tipping.

Prototype No 20 with a 15 mm wrapless acetate segment dual filter gave a DPM of 1.2 mg/cig. The repetition of this prototype gave 2.2 mg and a repetition on a larger scale will have to be made in order to determine where we stand.

361 GOSTA II

An American blend, GAMMA type product, delivering 2 or 4 mg tar. Moderate size.

Prototype No 48 which is a repetition of prototype No 39 with a Pela 54 cigarette paper from Schöller & Hösch has been accepted by Leaf department and Marketing.
This product will be tested in both an open and a blind test against BLEND ULTRA.

359 GULLIVER

Product test between MLF and MLK.

At the OMS meeting held in Lausanne on the 22nd of August the objective became that the MLK product should have at least the same taste impact than the MLF product.
Two products were prepared in order to reduce the dilution and the puff count. The objective was however not met for taste
Two further prototypes were therefore produced with the MARLBORO LIGHTS blend and results will be available within a week.

F I N L A N D

142 BUBBLE — 8 mg tar

The four prototypes with the German MARLBORO LIGHTS blend are not acceptable for taste.
A confirmation trial of prototype No 46 is being prepared at Amer-Tupakka.

366 BELMONT MENTHOL — Numbers reduction of the present BEM to below 12 mg/cig. DPM, 0.8 mg/cig. SN and 10 mg/cig. CO.

Trials are being prepared in Amer-Tupakka.
A tipping width of 27 mm has been accepted by Marketing.

J.-H. Du Bois

03/10/1980/JHD/cap

PROJECT TITLE	:	CIGARETTE DEVELOPMENT TECHNICAL REPORT
WRITTEN BY	:	P. NAGEL
PERIOD COVERED	:	September 1st - 26th 1980

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363 DELAWARE

Product test
Swiss tar : 3.0 mg
SN : 0.3 mg
Puff count : 6.5 - 7

The product test cigarettes had an off-taste.
During week 37 new cigarettes have been produced and selected according to their tobacco weight into 8 classes (prototypes 27P - 34P) in order to find out the cigarettes which reach the given objectives and give the best impact and good tobacco taste.
The samples of each class have been analysed and submitted to Panel A for the taste evaluation. Two prototypes (28P and 29P) are preferred and have been presented to the Marketing for final decision.
Both prototypes are new product tested.

Prototype No	28 P	29 P
Blend	CH 1436301N02	
Format	7.95 / 25 / 79.4	
Cigarette paper	Pela 200 special	
Tipping paper	Micro-laser perforated 6 M 0.3 . 3.5	
Filter	Double	Double
Tobacco weight	521	545
Total RTD	82	82
Filter RTD	85	86
Swiss tar	3.1	2.9
SN	0.31	0.32
CO	4.1	4.1
NO	0.07	0.08
Puff count	6.4	6.8

360 MIAMI

Flavour development
Product test
Swiss tar : 14 mg

In parallel with the project BARBARA two flavoured prototypes (12P and 13P) have been produced with MLK PB 120 filter, WP 60 cigarette paper and Z4/80 tipping paper during week 34.

Prototype No	12 P	13 P
Blend No	DB 0136502N02 (B)	DB 0136503N02 (B)
ETNA-1 (%)	0	11
Flavour	E AC 25	E AC 25
Swiss tar	13.7	13.4
SN	1.02	1.02
CO	14.3	13.7
NO	0.23	0.21
Puff count	9.8	9.2

These prototypes have been submitted to Panel A for the taste evaluation. Preferred version 12P has been presented to the Swiss Marketing. According to their opinion the cigarette has a good taste direction and fulfill the target of being acceptable for American blend as well as Maryland smokers and will be product tested against the actual MLF and BRD.

364 CALIFORNIA MPH

100 mm

Based on the specifications of the actual MPH cigarette three prototypes have been produced with CALIFORNIA 6P blend and three different cigarette papers.
All prototypes have been taste evaluated by Panel A. None of these trials reaches the quality level of prototype 6P.
In order to have a good quality cigarette another six prototypes have been produced with other cigarette papers. The outcome is not yet known.

364 CALIFORNIA MAA

80 mm
Swiss tar : 10 mg
SN : 0.8 mg

The reference is made to the monthly report of May 1980. Marketing has accepted the prototype No 6P which will be product tested against the similar version 3P with 18 mm filter length (higher dilution, the same analytical figures) and the present MAA.

278 EVEREST

In order to solve the problem with increasing tar level trials have been carried out on FLI and FLK cigarettes with a new modified blend. The analyses and taste evaluation are under way.

P. Nagel

P. Nagel

PROJECT TITLE : CIGARETTE DEVELOPMENT
TECHNICAL REPORT

WRITTEN BY : Z. SINGER

PERIOD COVERED : August 21st - September 26th 1980

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365 BARBARA

K = 13 mg
N = 0.9 mg
Puff count : 9
Format : 7.95 / 20 / 84.4

During week 34 four flavoured prototypes have been produced with MLK PC 120 filter, WP 60 cigarette paper and tipping paper of different porosities.
Flavour E AC 25 from Richmond has been applied on two blends. All prototypes have been presented to Panel A for taste evaluation. Prototype No 7P has been preferred and defined as a good quality cigarette for flavour and good tobacco blend balance. The flavour sensation was similar to the CAMEL control. This prototype has been submitted to Marketing in Munich.
It appears, however, that Marketing is looking for a cigarette with more body than prototype 7P. An improved prototype cigarette No 9P was developed and will be sent to Marketing Munich.

Prototype No	7	9
Tipping paper	Z3/30	Z3/20
ETNA (%)	0	11
K	13.3	13.3
N	0.93	0.97
CO	17.6	17.1
NO	0.21	0.23
Puff count	9.2	9.4

250 COCKPIT BLUE

Re-engineering
K = 14 mg
N = 0.9 mg
CO : 14 - 15 mg
Puff count : 9 (max. 10)
Format : 7.95 / 25 / 90 mm

Prototype No 100P has been accepted by the German Marketing. Please for more details refer to July-August monthly report.

335 LOLITA

K = 10 mg
N = 0.8 mg
Format : 7.95 / 25 / 84.4 mm

Reference is made to the monthly report of July-August 1980. Based on the specifications of the cigarette prototypes accepted for the product test in Munich three trials have been carried out. New burley casing and PC solutions from Richmond and flavours as in the Munich product test cigarettes were applied.

Prototype No	36 P	37 P	38 P
Version	C	O	E
Flavour	E AC 11	E AC 10	E AC 9

All prototypes have been submitted to the Panel A for taste evaluation and comparison with the original prototypes. They were rejected due to unclear taste and unbalanced flavour. The AC solution from Richmond is still expected.

377 JACQUELINE

K = 13 - 15 mg
N = 1.1 mg
Packing moisture : 12.5 - 13 %
Format : 7.95 / 25 / 90 mm
Cigarette paper : Wattens TAB 39300

In order to reach the objectives the development of this high quality cigarette started with six prototypes which have been produced with two different blends, different tipping papers, filter tows and sections.
All prototypes have been taste evaluated by Panel A.
Version No 2P was preferred and has been submitted to the German Marketing.

Prototype No	2
Tipping paper	Z3/60
Tow	5.0 Y / 45'000
K	18.9
N	1.82
CO	19.7
NO	0.22
Puff count	10.6

German Marketing asked for further development. K should not exceed 18 mg, and N must not be above 1.5 mg.

233 COUNTRY DB

Puff count : 9
N = 0.8 mg
TA = 1.75 mg

In order to solve the problem of the visibility of electro-perforated tipping paper zone and to curb the upwards trend of nicotine delivery, it was decided, during the Lausanne meeting of the 18th of August 1980, to continue the development as explained the step below :

1) Modify the blend in order to reduce nicotine to 0.8 mg.

2) Repeat versions 7 and 11 with the current blend and with the modified blend.

3) Based on the best version according to step 2, carry out trials with three plasticizers at two concentration levels.

4) Carry out trials with DAP treated stems using the following concentrations : 0.5 %, 1 %, 1.5 % based on stem weight.

5) Use citrate type cigarette paper.

6) Conduct trials with increased cut width (0.9 mm instead of 0.8 mm).

Z. Singer

Z. Singer

PME PRODUCT DEVELOPMENT, September 1980

PROJECT TITLE : PRODUCT DEVELOPMENT LABORATORY
PERIOD COVERED : August 22nd - September 24th 1980
WRITTEN BY : S. BEGUIN

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1) CIGARETTE PRODUCED IN THE MANUFACTURING DEPARTMENT

a) Total quantity : 190,000
b) Number of prototypes : 58

2) TOBACCO BLEND TRIALS IN THE PRIMARY DEPARTMENT

a) 18 x 1,000 kg (unflavoured)

3) FILTER RODS PRODUCED IN THE FILTER MAKING DEPARTMENT

a) Total quantity : 140,000
b) Number of prototypes : 4

4) PACKS (20 cig.) PRODUCED IN THE PACKING DEPARTMENT

a) Total quantity : 6
b) Number of projects : 10,600

5) PRODUCT TESTS PREPARED : 2

S. Béguin

SEB / cap

PROJECT TITLE : Flavour Development

WRITTEN BY : J.P. Fatton

PERIOD COVERED : July 25th - September 25th

1. Projects

1.1 Switzerland and Germany

Barbara - Miami

The ingredients ordered from PM USA have been received. The recipes were established and the prototypes produced.

Harvard

New top flavours developed by PM USA are expected shortly.

Lolita

The new casing formulae and ingredients sent by PM USA have arrived. Prototypes were made and smoked for a first evaluation.

These trials will be repeated with the new top flavours to come.

1.2 Pan European projects

Peter Pan

Recipes of new casings were established. Prototypes containing the new casing ingredients and LM-AC were made.

1.3 United Kingdom

Keegan

The prototypes made of the new casings and top flavours developed in PM USA are available but have not yet been evaluated.

Hilton

Cigarettes with 5% of C14 sprayed on the blend will shortly be produced.

1.4 USSR

Cosmos

Investigations concerning the preservation and degradation of AK-BC-2, AK-PC-1, AK-TF and AK-AC-10 during transportation are under way.

2. Contact with suppliers

Ms. B. Krasna and the undersigned visited International Flavours and Fragrances and Naarden International in Holland on September 9th - 12th, 1980. The following subjects were discussed:

- coumarine substitutes
- cocoa substitutes
- honey flavours (Hunter conform)
- mint aroma for menthol cigarettes

Several samples of interest will be sent to us for testing purposes (Ref. 1).

J.P. Fatton

JPC Fatton

References:

1. Report on the visit to International Flavours and Fragrances and Naarden International by Ms. B. Krasna on September 23rd, 1980.

Project title : Cigarette and Smoke Analysis

Period Covered : September 1 - 30, 1980
Report Written by : F. Senehi
Report Approved by : F. Lopes

Comparative tar results between LGC (Governement Chemist Laboratory), United Kingdom, and manufacturers

The following table, listing tar biases between LGC and manufacturers for Survey 13 (period : November 1979 to April 1980), was summarized at the Tar and Nicotine Working Group Meeting which was held on July 23, 1980 (ref. 1) :

	6 month's biases on all brands
BAT	- 0.4
Carreras-Rothmans	- 0.3
Gallaher	- 0.4
Imperial Tobacco	- 0.5
Philip Morris	- 0.4
Player	- 0.8
Wills	- 0.7

We note that all the manufacturers find, in the average, 0.5 mg lower tar results than LGC.

Comparative results between LGC (Governement Chemist Laboratory), United Kingdom, and QC PME (table 1)

The tar and CO results from Survey 10 to Survey 13, obtained on Marlboro by LGC and PME, have been issued (ref. 2).

We observe that the tar of Survey 13 is at a critical level. However, since June 1980, we have taken action by increasing the filter RTD which caused a slight decrease in tar (Survey 14).

Survey 14 :

Month	LGC tar	PME UK tar (mg)
1	not received	15.6
2	not received	16.4
3	not received	15.2
3 month's average	=	15.7

Meeting of the International Organization for Standardization in Brussels

From September 23 to September 25, 1980, the undersigned participated in the ISO/TC 126 group meeting GT3 "Mechanical Smoking", and WG5 "Determination of Carbon Monoxide in the Cigarette Smoke".

Project title : Cigarette and Smoke Analysis

The most important fact to be mentioned is that the members decided to elaborate two international norms for mechanical cigarette smoking : The first one will include the smoke trap with filter made of glass fibre, and the second one the electrostatic trap. This decision was conditioned by the difficulty to include both smoke trap systems in one norm. The main reasons are :

1. The different designs of smoking machines
2. The different designs of smoke traps
3. The systematic differences in smoke yields due to the smoke trap system used

PME smoke laboratory

Since several months, the smoke lab capacity has not been sufficient to carry out all the analyses for which the demand increases constantly.

The purchase of a Filtrona 300 smoking machine (20 ports) and of a Technicon AA II C microprocessor, to be operational by mid-October 1980, will enable us to satisfy the present demand.

Product reports

Product reports were written on the following new or modified brands :

Brand	Manufacturer	Country of sale
Stanford Filterfrei 84/F (new brand)	Reemtsma	West Germany
Cambridge 80/F (new brand)	imported by Rothmans	Switzerland
Gallant 84/F box (new format)	Burrus	Switzerland
Gallant 84/F soft (new format)	Burrus	Switzerland
Academy Int. 92/F (new brand)	Gallaher	United Kingdom
Silk Cut Ultra Low 84/F (new brand)	Gallaher	United Kingdom

QC FINISHED PRODUCT

F. Senehi

References :

1. Minutes of the 8th meeting of the Tar and Nicotine Working Group, July 23, 1980, Tobacco Advisor Council, London
2. F. Senehi's letter dd. 09-10-1980

Enclosure :

Table 1 : Comparative results LGC - PME on Marlboro

10-03-1980
SEF/mos

TABLE 1

COMPARATIVE RESULTS LGC* - PME ON MARLBORO

		L.G.C*		PHILIP MORRIS		MONTHLY BIASES	
		Tar	CO	Tar	CO	Tar	CO
Survey 10	1	15,74	15.73	15,93	14,6	- 0,19	+1.13
	2	15,43	14.74	14,35	14,5	+ 1,08	+0.24
	3	15,53	14.99	14,51	14,9	+ 1,02	+0.09
	4	15,82	16.59	15,47	15,6	+ 0,35	+0.99
	5	15,19	16.30	15,33	15,4	- 0,14	+0.90
	6	15,46	15.23	15,74	16,3	- 0,28	-1.07
	$\bar{x}$	15,53	15.59	15,22	15,22	+ 0,31	+0.37
Survey 11	1	14,91	15.03	15,5	15,5	- 0,59	-0.47
	2	15,15	14.08	15,5	16,5	- 0,35	-2.42
	3	16,55	14.74	15,4	14,8	+ 1,15	-0.06
	4	16,14	15.18	15,5	14,7	+ 0,64	-0.48
	5	15,76	15.47	15,0	16,2	+ 0,76	-0.73
	6	15,55	15.18	15,4	17,3	+ 0,15	-1.12
	$\bar{x}$	15,68	14.95	15,38	15,83	+ 0,30	-0.88
Survey 12	1	15,51	14,05	15,5	15,7	+ 0,01	- 1,65
	2	16,43	15,63	15,9	16,2	+ 0,53	- 0,57
	3	15,85	15,01	15,7	17,6	+ 0,15	- 2,59
	4	15,26	14,15	16,1	15,1	- 0,84	- 0,95
	5	15,92	15,88	14,9	16,8	+ 1,02	- 0,92
	6	16,02	15,51	15,0	14,3	+ 1,02	+ 1,21
	$\bar{x}$	15,83	15,04	15,52	15,95	+ 0,31	- 0,91
Survey 13	1	16,16	15,84	16,1	16,2	+ 0,06	- 0,36
	2	16,05	16,35	15,6	17,0	+ 0,45	- 0,65
	3	16,72	15,59	16,3	16,8	+ 0,42	- 1,21
	4	16,71	16,03	16,7	17,0	+ 0,01	- 0,97
	5	16.53	15.72	15,6	15,8	+ 0.97	- 0.08
	6	16.16	15.64	15,7	15,6	+ 0.46	+ 0.04
	$\bar{x}$	16.39	15.86	16,00	16,40	+ 0.39	- 0.54

LGC* = Government Chemist Laboratory, United Kingdom

PROJECT TITLE : Additives and Analytical Services

Period Covered : August 26 - September 23, 1980
Report Written by : A. Widmer
Report Approved by : F. Lopes

METHODS

The following method was added to the PME - method file:

- Control of mentholated solutions (No. 134).
  After the determination of the density by a densitometer, the menthol content is evaluated by means of a calibration curve.

INSTRUMENTS

- A "HP 5840 A" GC with a single FI - Detector and a dual TC - detector equipped with a "HP 7672 A" autosampler was set up on September 8. The functional control was carried out by a representative of the supplier.

- A "Mettler DL 40" titrator equipped with a "Mettler AK 160" scale was set up on September 15. The functional control was carried out by a representative of the supplier.

SERVICES FOR OTHER GROUPS

- Analyses for Mr. P. Ghiste:

  Chloride in extracts (8 samples).

- Analyses for Mr. M. Regard:

  pH, calcium, magnesium, potassium, sodium, iron and $KMnO_4$ consumption in water (2 samples).

QC ANALYTICAL SERVICES

A. Widmer

25.09.1980 ALW/mat

PROJECT TITLE : New Material Development

WRITTEN BY : E. Erkohen

PERIOD COVERED : August 26th, September 26th, 1980

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1. Tipping paper

Five bobbins perforated by micro-laser were received from Malaucène. The permeability of air of this tipping paper is 58 l/h/4 cm. Cigarettes were made and compared to those made of Benkert Z3/60 standard tipping paper. The smoke deliveries are summarized in the table below.

	Malaucène 3M 0,11.6.5 Trial	Benkert Z3/60 Control
Dilution % "US"	14	15
CO mg/cig	19.3	19.4
NO mg/cig	0.29	0.29
TPM mg/cig	19.7	19.4
DPM mg/cig	17.2	17.2
SN mg/cig	1.17	1.19
Puff count	9.1	9.1
HCN µg	221	221
Total Aldehydes mg/cig	1.34	1.36

Both cigarettes were submitted for taste evaluation. The trial was found different from the control. (Ref. 1)

2. Filter paper

Schoeller & Hoesch developed a new high-porous plug wrap with a substance of 20 g/m2 which has properties comparable to their usual grades with a substance of 30 g/m2. From an economic point of view there is an advantage of less down-time for changing the bobbins. The physical test results are given in the table below.

Quality	Porosity "K"	Substance g/m2	Thickness "mm"	Tensile strength "kg"
FU-POV 100 mgl	124.2	21.2	0.059	2.426
FU-POV 150 mgl	160.3	21.3	0.063	2.468
FU-POV 250 mgl	269.2	20.5	0.064	1.833

3. Filter material

Eastman submitted a 3.3/44000Y tow similar to the type used in PM-USA. The first test run on the "capability" of this tow was not conclusive (Ref. 2). In the meantime, PM-USA changed the lot number. We ordered a new bale similar to the type PM-USA is now using. Test on "capability" will be run on this new tow in the near future.

E. Erkohen

E. Erkohen

References:

1. Taste evaluation of September 12th, 1980
2. Monthly report, New Material Development of August 1980 by E. Erkohen

September 30th, 1980
ELE/noh

PROJECT TITLE : SPECIFICATIONS / PROCESS ASSURANCE

Period Covered : 23.8.1980 - 30.9.1980
Report Written By : T. Bel / C. Flury / A.-M. Kopp
Report Approved By: J.B. Boder

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0. SPECIFICATIONS - OVERALL

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1. SPECIFICATIONS PER PRODUCTION CENTER

1.1 FTR Fabriques de Tabac Réunies SA Neuchâtel
1.2 Intertaba S.p.A. Zola Predosa

1.3 PMH Ph. Morris Holland Eindhoven/Bergen op Zoom

MLF 080 Marlboro Filter is newly sold on the Channel Islands.

Marlboro 80 mm in 10s packs, MLE 018 and MLE 205, are sold in Sweden and Guadeloupe.

1.4 Ph. Morris Germany Munich/Berlin

1.5 Weltab SA Bruxelles

Provisional specifications are available from Weltab for the manufacture of the following brands in Liège, Belgium, with Jubilé:
- DYF Darcy Filtre
- DYR Darcy Rouge
- PMR Ph. Morris Regular
- REC Record
- VAR Visa Rouge
- VAV Visa Verte

Except for Record, the Jubilé specs correspond to the previous Weltab specs- Record has been re-engineered.

1.6 PM UK Ph. Morris London

The cigarette making spec MLK 09 Marlboro King Size, manufactured at Silvertown, has been modified re-garding the ciameter and packed cigarette moisture (new PME standards) and the filter RTD.

As Manchester Tobacco will produce MLK Marlboro King Size under contract for PM UK, new specs have been

issued for this company :
- MLK 34 cigarette making
- MLK 318 GB vends
- MLK 320 normal sale

1.7. Licensees

- DDR :
Project cigarette making specs have been established for the manufacture of a standard non-diluted MPH Multifilter 100s in Dresden.

- Holland :
A complet set of manufacturing specifications (7 different cigarettes and 14 packing versions) have been prepared for Ed. Laurens B.V. Gravenhague.

2. MATERIAL SPECIFICATIONS

2.1. Submissions to suppliers

PTP/081	577 10 81	Supplier : Tann
PTP/083	577 10 71	" Tann
PTP/015	Blancophan 40 A mec. perf.	" Benkert
LTP/007	Acquafuge 944 BNG (total length 48mm)	Malaucene
LTP/011	" " " " " 58mm	Malaucene
PCF/052	Propafilm C.23	I.C.I.
PCF/056	" MTX 22	I.C.I.

2.2. Approvals by suppliers

PCP/042	BDP 30	Supplier : Braunstein
PFM/037	Semi-filter "SPA" FLI	" Job
PFP/027	Plug wrap HF 24 K 28 (4/2)	" Glatz
PFP/036	Plug wrap FU-POV 100K	" Sch.& Hoesch
LTP/007	Acquafuge 944 BNG (total length 48mm)	Malaucene
LTP/011	" " " " " 58mm)	Malaucene
PTP/022	330	Tann
PTP/055	330 EPZ	Tann
PTP/081	577 10 81	Tann
PTP/083	577 10 71	Tann
PCB/016	Gold cardboard	Waddingtons

3. PME STANDARD RECIPES

- Two new recipes have been established for project Maraschino: CEH-PC and CEH-AC.

- Eight recipes have been modified (new blends, new places of manufacture, etc.).

4. SPECIFICATIONS ON EDP

No progress.
Mr Mike Davis is expected to see us for another discussion on September 30, 1980.

5. P R O C E S S A S S U R A N C E

5.1 AccuRay

- PME Method No 710 "AccuRay Limits" is being written.
- It has been decided to review the specified AccuRay limits in several stages:
  - PM UK already modified
  - PMG being modified
  - Weltab will be modified
  - PMH will be modified beginning 1981 only
  - FTR will be settled by the end of 1980

- Several discussions with the AccuRay engineer have taken place (see memo THB to JBB dated 24.9.1980).

5.2 NTM Non-Tobacco Material Weights in Specifications

- The results from the production centers are expected regarding the usage of glues on the tipping papers.

- Trials in production will be made at FTR before the establishment of the method concerning the determination of the quantity of glues applied to the filters.

5.4 Dilution

The inventory of results has been distributed to the production centers.

5.6 Burley Treatment

This study is pending.

5.7 Kitchen and Pre- and After-cutting Solutions

A report on this subject will be established.

5.8 Production of Starch Glue

- A report on the existing methods will be issued.

- A trial has been made in Bergen op Zoom with the preparation method used in Neuchâtel.

5.9 Tobacco Weights

A study has been made to find out and explain the differences between the tobacco weights specified and the tobacco weights realised, on specification level. The different types of blends and equipments have been taken into consideration (see memo THB to JBB dated 3.10.1980).

5.10 New Processing Depts PMG Berlin and PMH Bergen op Zoom

A report on the meeting held in Berlin on 11/12th August has been issued (dated 19.9.1980).

6. PME METHODS

6.1 Three supply material methods have been reviewed (Nos 10, 11, and 23).

6.1 Four new methods have been distributed:
No 134 Check of menthol solutions
No 210 Tobacco moisture by oven drying
No 211 Filling power
No 212 Sieve test

Thierry Bel

Catherine Flury

Anne-Marie Kopp

PROJECT TITLE : Physical Testing Methods

Period Covered : September 1 - September 30, 1980
Report Written by : T. Piko
Report Approved by : F. Lopes

PME PRESSURE DROP AND DILUTION INSTRUMENTS

9 RTD - Dilution instruments were dispatched.

- 5 instruments to PMG Berlin
- 4 instruments to PM Holland.

CIGARETTE COMPRESSIBILITY

We received the 10 instruments for the automatic determination of the cigarette compressibility.

At the present time, these instruments are submitted to a reliability test.

They will be sent to the different laboratories of PME affiliates at the end of October 1980.

PRESSURE DROP AND DILUTION INSTRUMENT EX RICHMOND

Two HP calculators were connected to the PDI/DDI instruments. They will enable us to have printed individual and average values as well as the standard deviation.

After the last tests, which will be carried out until end October, one instrument will be transferred to the smoke laboratory for the routine check of the cigarettes.

PHYSICAL TESTS

A new collective test on physical parameters (RTD, dilution, o.v. compressibility) was initiated.

The cigarettes were manufactured, conditioned, packed and sent to the participants.

QC - METHODS

T. Piko

13.10.1980 THP/mat

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T S OSCINE
OCT 27 1980